

REMARKS:

Claims 1, 4-8, 11-15, 18-23, 25-29, 31-35, 37-41, and 43 are currently pending in the subject Application.

Claims 2, 3, 9, 10, 16, 17, 24, 30, 36, and 42 have been previously canceled without *prejudice*.

Claims 1, 4-8, 11-15, 18-23, 25-29, 31-35, 37-41, and 43 stand rejected under 35 U.S.C. § 103(a) over U.S. Patent No. 6,047,290 to Kennedy et al. (“*Kennedy*”) in view of U.S. Patent Publication No. 2002/0156663 to Weber et al. (“*Weber*”).

Applicants respectfully submit that all of Applicants arguments are without *prejudice* or *disclaimer*. In addition, Applicants have merely discussed example distinctions from the cited prior art. Other distinctions may exist, and as such, Applicants reserve the right to discuss these additional distinctions in a future Response or on Appeal, if appropriate. Applicants further respectfully submit that by not responding to additional statements made by the Examiner, Applicants do not acquiesce to the Examiner's additional statements. The example distinctions discussed by Applicants are considered sufficient to overcome the Examiner's rejections.

Weber is Invalid Prior Art Over the Subject Application

Applicants respectfully submit that the subject Application was filed on 4 December 2001 and claims the benefit under 35 U.S.C. § 119(e) of U.S. Provisional Application No. 60/281,144, filed 2 April 2001. *Weber*, which published on 24 October 2002, was not filed until 13 July 2001. Therefore, because the filing date of *Weber* is after the priority date of the subject Application, that is, because the priority date of the subject Application is *three months prior to the filing of Weber*, *Weber is invalid as prior art over the subject Application*.

It is noted however, that even though *Weber* claims priority to a provisional application filed 13 July 2000, much of the teaching relied upon by the Examiner in rejecting Claims 1, 4-8, 11-15, 18-23, 25-29, 31-35, 37-41, and 43 under 35 U.S.C. § 103(a) is not part of the provisional application filed 13 July 2000. The disclosure of the invention in the parent application (i.e.,

provisional Application) and in the later-filed application must be sufficient to comply with the requirements of the first paragraph of 35 U.S.C. 112. See *Transco Products, Inc. v. Performance Contracting, Inc.*, 38 F.3d 551, 32 USPQ2d 1077 (Fed. Cir. 1994). Accordingly, if the Examiner continues to cite *Weber* as prior art, which it is not valid prior art, it is clearly not valid prior art, over the subject Application, Applicants respectfully request that the Examiner produce a showing under MPEP 2136.03 that “the provisional application(s) properly supports the subject matter relied upon to make the rejection in compliance with 35 U.S.C. 112, first paragraph.”

Applicants respectfully submit that *Weber* is not valid prior art over the subject Application. Thus, Claims 1, 4-8, 11-15, 18-23, 25-29, 31-35, 37-41, and 43 are patentable over the cited reference, (i.e., *Kennedy*) because, as discussed below, the Examiner acknowledges that *Kennedy* fails to disclose various limitations recited in Applicants Claims.

REJECTION UNDER 35 U.S.C. § 103(a):

Claims 1, 4-8, 11-15, 18-23, 25-29, 31-35, 37-41, and 43 stand rejected under 35 U.S.C. § 103(a) over *Kennedy* in view of *Weber*.

Applicants respectfully submit that *Weber* is invalid as prior art, and as such is not properly citable over the subject Application. Accordingly, Applicants respectfully submit that *Kennedy* fails to disclose, teach, or suggest each and every element of Claims 1, 4-8, 11-15, 18-23, 25-29, 31-35, 37-41, and 43. Thus, Applicants respectfully traverse the Examiner’s obvious rejection of Claims 1, 4-8, 11-15, 18-23, 25-29, 31-35, 37-41, and 43 under 35 U.S.C. § 103(a) over *Kennedy*.

The Proposed *Kennedy-Weber* Combination Fails to Disclose, Teach, or Suggest Various Limitations Recited in Applicants Claims

For example, with respect to independent Claim 8, this claim recites:

A system for generating a supply chain plan, comprising:
a database operable to store data describing a supply chain network comprising a plurality of buffers, each **buffer being operable to store a plurality of items and associated with a corresponding time variable**, the supply chain network constrained by a constraint;

a **linear programming optimizer** coupled to the database and operable to:

generate a linear programming problem for the supply chain network;

approximate the linear programming problem by discretizing the corresponding time variables of the buffers to yield a plurality of discretized corresponding time variables and by relaxing the constraint to yield a relaxed constraint; and

calculate an optimized supply chain plan for the approximated linear programming problem, the optimized supply chain plan describing a quantity of items at each buffer for at least one time value of the corresponding time variable and including a list of producers operable to supply the items to each buffer; and

a heuristic solver coupled to the database and operable to adjust the optimized supply chain plan to satisfy the constraint, wherein the heuristic solver is operable to adjust the optimized supply chain plan by:

repeating the following until a last upstream buffer is reached:

selecting a buffer;

adjusting one of (a) the quantity of items at the selected buffer, and (b) at least one time value of the corresponding time variable of the selected buffer to satisfy the constraint; and

proceeding to a next upstream buffer; and

repeating the following until a last downstream buffer is reached:

selecting a buffer;

planning production to either (a) supply the items to the selected buffer at the adjusted time value, or (b) supply the adjusted quantity of items to the selected buffer; and

proceeding to a next downstream buffer; and

an order planner coupled to the database and operable to generate an order plan by planning production to supply the quantity of items to each buffer according to the list of producers associated with the buffer.

In addition, *Kennedy* or *Weber*, either individually or in combination, fail to disclose each and every limitation of independent Claims 1, 15, 22, and 23.

Applicants respectfully submit that *Kennedy* fails to disclose, teach, or suggest independent Claim 8 limitations regarding a “database operable to store data describing a supply chain network comprising a plurality of buffers, each **buffer being operable to store a plurality of items and associated with a corresponding time variable** the supply chain network constrained by a constraint”. In particular, the Examiner states:

A database operable to store data describing a supply chain network comprising a plurality of buffers, each buffer being operable to store a plurality of items and associated with a corresponding time variable, the supply chain network

constrained by a constraint (See figure 1, column 1, lines 39-50, column 2, lines 24-35, 39-52, and 57-64, column 3, lines 20-45, column 6, lines 15-25, wherein data is accessed associated with a supply chain. Buffers are used to store items (i.e. resources, etc.) and associated time values (i.e. delivery time, timing), wherein the supply chain network is restricted by the amount of supply of items available);

(8 April 2008 Office Action, Page 11). By contrast, the cited portion of *Kennedy* on which the Examiner relies does not disclose a “database operable to store data describing a supply chain network comprising a plurality of buffers, each **buffer being operable to store a plurality of items and associated with a corresponding time variable** the supply chain network constrained by a constraint”, as recited in independent Claim 8 but rather is **a software object that models the management of the flow of interchangeable items in the supply chain or manufacturing plant.** (Column 2, Lines 39-65). (Emphasis added). In fact, Applicants respectfully direct the Examiner’s attention to Figure 1 of *Kennedy*, on which the Examiner relies:

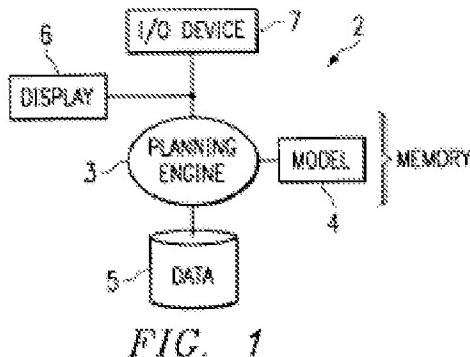


FIG. 1

Applicants further respectfully direct the Examiner’s attention to the cited portion of *Kennedy*, on which the Examiner relies:

Typically, **the present invention can be implemented using a variety of software objects**. As used herein, an “item” is a unit of raw material or assembled components that flows through the supply chain or manufacturing process. **A “buffer” refers to a software object that models the management of the flow of interchangeable items in the supply chain or manufacturing plant.** For the most part, material and inventory planning functionality is attached to buffers. A buffer can model all flow of a particular item, or a subset of that. In modeling a supply chain, a buffer typically only models the flow of items at a particular location (an SKU). Smaller subsets can be defined. For example, one buffer could model items at a location to be supplied to a very important customer, while another buffer could model that item supplied to other customer. One buffer could model items

at a location built a certain way (e.g., by a U.S. Military-approved resource), while another buffer models the rest. In general, a buffer defines interchangeability, and the items managed by a buffer are interchangeable.

(Column 2, Lines 38-56). Applicants respectfully submit that the Examiner has mischaracterized Figure 1 and the cited portion of *Kennedy*. For example, *Kennedy* does not disclose “[b]uffers are used to store items (i.e. resources, etc.) and associated time values (i.e. delivery time, timing),” as asserted by the Examiner, but instead, are a “*software object that models the management of the flow of interchangeable items in the supply chain or manufacturing plant.*”

Applicants further respectfully submit that it appears that the Examiner is attempting to equate the “*plurality of buffers*” recited in independent Claim 8 with the term “*buffer*” disclosed in *Kennedy*. (8 April 2008 Office Action, Page 11). Applicants respectfully submit that this equation is inaccurate, that is the term “*buffer*” as disclosed in *Kennedy*, does not equate to the “*plurality of buffers*” as recited in independent Claim 8 because, among other things, the term “*buffer*” disclosed in *Kennedy* is only *a software object that models the management of the flow of interchangeable items in the supply chain or manufacturing plant* and is not “*operable to store a plurality of items and associated with a corresponding time variable* the supply chain network constrained by a constraint”, as recited in independent Claim 8. Applicants respectfully request the Examiner to verify the references to *Martin*, to ensure that some mistake has not been made.

The Office Action Acknowledges that *Kennedy* Fails to Disclose Various Limitations Recited in Applicants’ Claims

Applicants respectfully submit that the Office Action acknowledges, and Applicants agree, that *Kennedy* fails to disclose various limitations recited in independent Claim 8. Specifically *the Examiner acknowledges that Kennedy fails to disclose:*

the algorithm used for the supply chain network is a generated linear programming problem, *approximating this linear programming problem by discretizing the time variables of the buffers to yield a plurality of discretized time variables* and by relaxing the constraint to yield a relaxed constraint, or

calculating an optimized supply chain plan for the approximated linear programming problem.

(8 April 2008 Office Action, Pages 7-8). (Emphasis added). In addition, the Examiner also acknowledges that Kennedy fails to disclose various limitations recited in dependent Claim 4. Specifically *the Examiner acknowledges that Kennedy fails to disclose*:

... satisfying a lead time constraint.

(8 April 2008 Office Action, Page 9). (Emphasis added). However, the Examiner asserts that the cited portions of *Weber* disclose the acknowledged shortcomings in *Kennedy*. Applicants respectfully disagree and respectfully submit that, as discussed above, *Weber is invalid as prior art, and as such is not properly citable over the subject Application.*

The Office Action Fails to Properly Establish a *Prima Facie* case of Obvious over the Proposed *Kennedy-Weber* Combination

Applicants respectfully submit that the Office Action fails to properly establish a *prima facie* case of obviousness based on the proposed combination of *Kennedy* and *Weber*, either individually or in combination. A recent Federal Circuit case makes it crystal clear that, in an obviousness situation, the *prior art must disclose each and every element of the claimed invention, and that any motivation to combine or modify the prior art must be based upon a suggestion in the prior art*. *In re Lee*, 61 U.S.P.Q.2d 1430 (Fed. Cir. 2002). (Emphasis Added). Conclusory statements regarding common knowledge and common sense are insufficient to support a finding of obviousness. *Id.* at 1434-35. With respect to the subject Application, the Examiner's admission that *Kennedy* fails to disclose "the algorithm used for the supply chain network is a generated linear programming problem, *approximating this linear programming problem by discretizing the time variables of the buffers to yield a plurality of discretized time variables* and by relaxing the constraint to yield a relaxed constraint, or calculating an optimized supply chain plan for the approximated linear programming problem," is *prima facia* evidence that the *prior art*, here *Kennedy, does not disclose each and every element of Applicants claimed invention*. (8 April 2008 Office Action, Pages 7-8). (Emphasis added).

Applicants Claims are Patentable over the proposed *Kennedy-Weber* Combination

Applicants respectfully submit that independent Claims 1, 8, 15, 22 and 23 each contain unique and novel limitations that are not disclosed, taught, suggested, or even hinted at in *Kennedy and Weber*, either alone or in combination. Applicants further respectfully submit that claims 1, 8, 15, 22 and 23 are not rendered obvious over the proposed combination of *Kennedy and Weber*, because the filing date of *Weber* is after the priority date of the subject Application, that is, the priority date of the subject Application is *three months prior to the filing of Weber*, and therefore, *Weber is invalid as prior art over the subject Application.*

Applicants further respectfully submit that dependent claims 4-7, 11-14, 15-21, 25-29, 31-35, 37-41, and 43 are not rendered obvious over the proposed *Kennedy and Weber* combination and are also considered to be in condition for allowance for at least the reason of depending from allowable claims.

For at least the reasons set forth herein, Applicants respectfully submit that Claims 1, 4-8, 11-15, 18-23, 25-29, 31-35, 37-41, and 43 are not rendered obvious by the proposed combination of *Kennedy and Weber*. Applicants further respectfully submit that Claims 1, 4-8, 11-15, 18-23, 25-29, 31-35, 37-41, and 43 are in condition for allowance. Thus, Applicants respectfully request that the rejection of Claims 1, 4-8, 11-15, 18-23, 25-29, 31-35, 37-41, and 43 under 35 U.S.C. § 103(a) be reconsidered and that Claims 1, 4-8, 11-15, 18-23, 25-29, 31-35, 37-41, and 43 be allowed.

CONCLUSION:

In view of the foregoing amendments and remarks, this application is considered to be in condition for allowance, and early reconsideration and a Notice of Allowance are earnestly solicited.

Although Applicants believe no fees are deemed to be necessary; the undersigned hereby authorizes the Commissioner to charge any additional fees which may be required, or credit any overpayments, to **Deposit Account No. 500777**. If an extension of time is necessary for allowing this Response to be timely filed, this document is to be construed as also constituting a Petition for Extension of Time Under 37 C.F.R. § 1.136(a) to the extent necessary. Any fee required for such Petition for Extension of Time should be charged to **Deposit Account No. 500777**.

Please link this application to Customer No. 53184 so that its status may be checked via the PAIR System.

Respectfully submitted,

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Date

/Steven J. Laureanti/signed
Steven J. Laureanti, Registration No. 50,274

BOOTH UDALL, PLC
1155 W. Rio Salado Pkwy., Ste. 101
Tempe AZ, 85281
214.636.0799 (mobile)
480.830.2700 (office)
480.830.2717 (fax)
steven@boothudall.com

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